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**How to Extract Time-resolved Signal from Laue Diffraction by an Energy-chirped Hard X-ray Pulse: a Proposal**

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A method to generate an energy-chirped hard x-ray pulse using a scheme based on overcompression of electron bunches is currently being developed at the Linac Coherent Light Source. These energy-chirped pulses are expected to reach 1–1.5% bandwidth at 8 keV and a subpicosecond temporal width. We propose to use these chirped pulses to study light-initiated reactions in biological macromolecules like myoglobin and photoactive yellow protein at ultrafast time resolution in the time domain from 100 picoseconds to 10 femtoseconds. One of the research and development areas required by this study is an effective numerical algorithm to extract time-resolved signal from Laue diffraction images produced by these chirped pulses. We will present a proposal of such an algorithm and some preliminary data.